

FIG. 1b
$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 2.03, \frac{N_{R2}}{N_{S2}} = 2.00, \frac{N_{R3}}{N_{S3}} = 2.25$$

RATIO SPREAD	8.47
RATIO STEPS	
REV2/1	-1.16
1/2	1.81
2/3	1.68
3/4	1.50
4/5	1.29
5/6	1.18
6/7	1.10
7/8	1.11

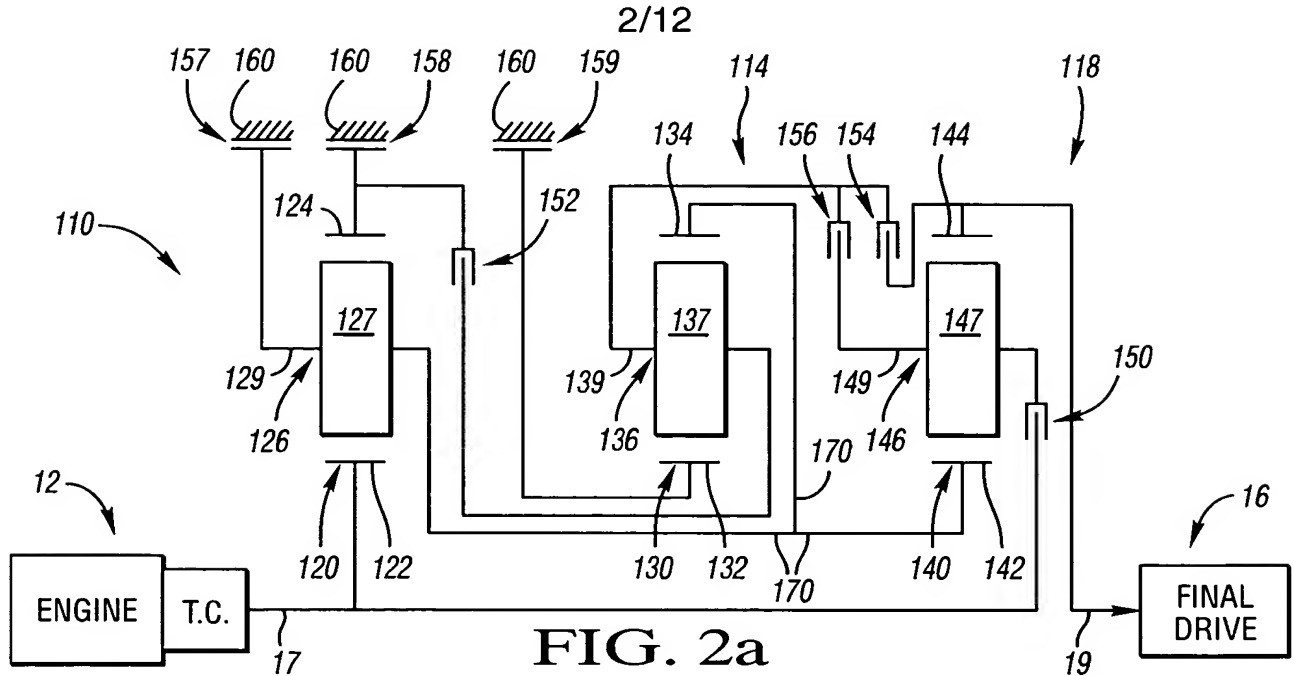


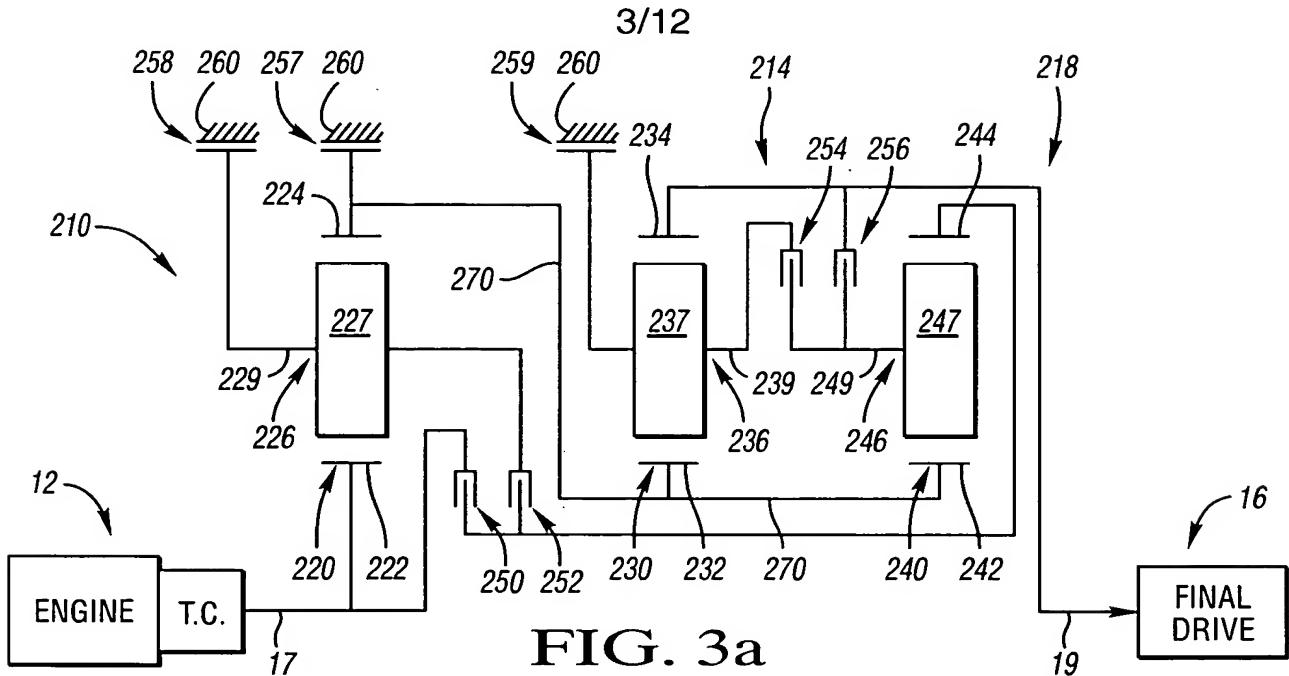
FIG. 2b

	RATIOS	150	152	154	156	157	158	159
REVERSE 3	-4.09		X	X			X	
REVERSE 2	-1.72		X		X	X		
REVERSE 1	-1.04		X	X		X		
NEUTRAL	0.00			X			X	
1	6.13			X			X	X
2	4.09				X		X	X
2'	3.54		X	X				X
3'	2.72			X	X		X	
3	2.36		X		X			X
4'	1.50	X		X				X
4	1.20	X			X			X
5	1.00	X	X		X			
6	0.80	X	X					X
7	0.70	X	X				X	
8	0.60	X	X			X		

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.72$, $\frac{N_{R2}}{N_{S2}} = 2.00$, $\frac{N_{R3}}{N_{S3}} = 2.00$

RATIO SPREAD	10.21
RATIO STEPS	
REV3/1	-0.67
1/2	1.50
2/3	1.73
3/4	1.97
4/5	1.20
5/6	1.24
6/7	1.14
7/8	1.17



	RATIOS	250	252	254	256	257	258	259
REVERSE 3	-6.92		X		X		X	
REVERSE 2	-2.63	X	X					X
REVERSE 1	-1.73			X	X		X	
NEUTRAL	0.00		X		X			
1'	49.65		X	X			X	
1	10.59		X		X			X
2'	6.95		X	X				X
2	4.55				X		X	X
3'	3.64		X		X	X		
3''	2.64		X	X		X		
3	2.21	X			X			X
4	1.65	X			X		X	
5	1.33	X			X	X		
6	1.00	X		X	X			
7'	0.97	X		X		X		
7	0.95	X		X			X	
8	0.88	X		X				X

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 1.73, \frac{N_{R2}}{N_{S2}} = 2.63, \frac{N_{R3}}{N_{S3}} = 3.00$$

RATIO SPREAD	11.17
RATIO STEPS	
REV3/1	-0.65
1/2	2.32
2/3	2.06
3/4	1.34
4/5	1.24
5/6	1.33
6/7	1.03
7/8	1.02

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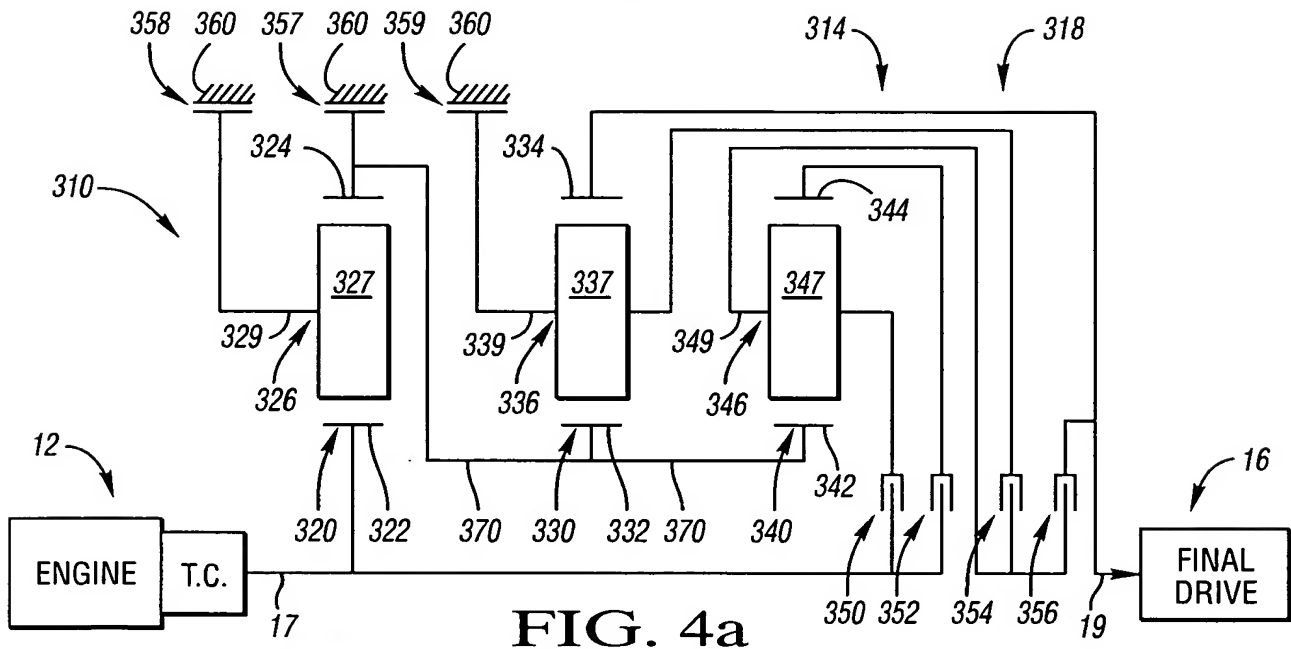


FIG. 4a

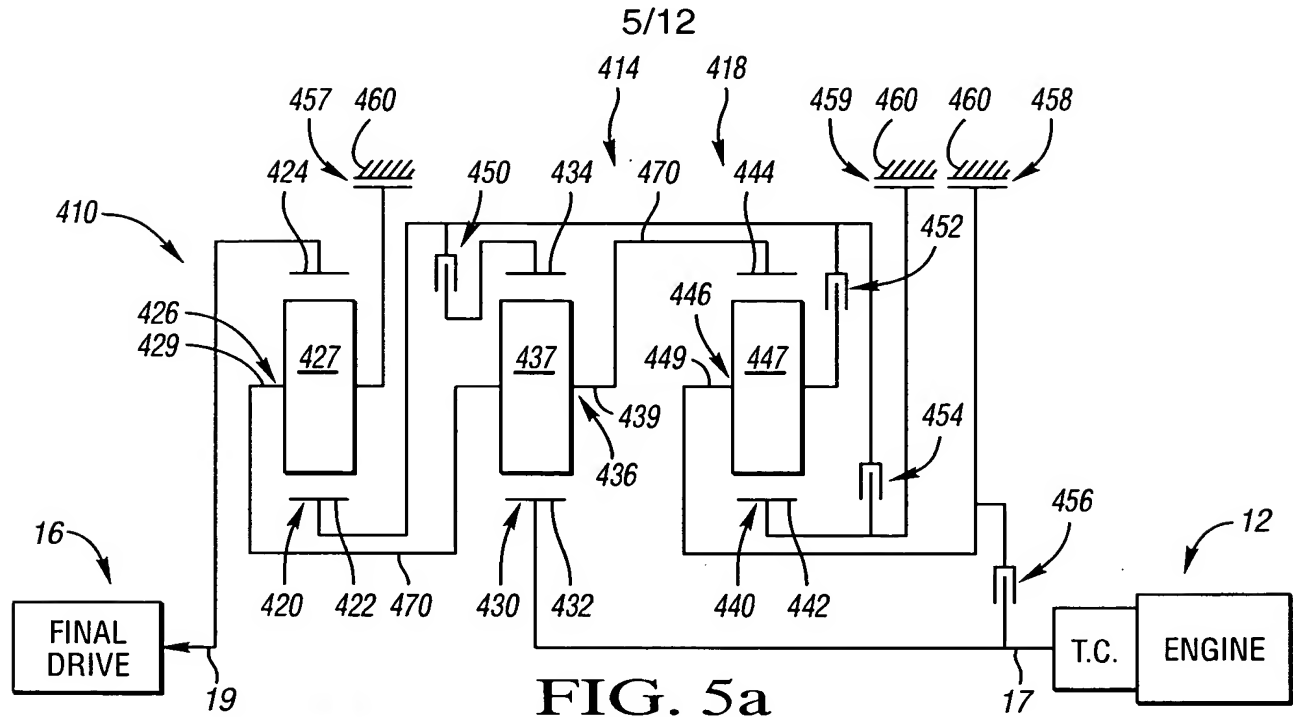
FIG. 4b

	RATIOS	350	352	354	356	357	358	359
REVERSE 2	-2.63	X	X					X
REVERSE 1	-2.02			X	X		X	
NEUTRAL	0.00		X					X
1	5.33		X				X	X
2	2.94		X		X			X
3	2.08		X		X		X	
4	1.53		X		X	X		
4'	1.40		X	X				X
5'	1.18		X	X			X	
5	1.11		X	X		X		
6	1.00	X	X	X				
7	0.72	X		X		X		
8	0.64	X		X			X	

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 2.02, \frac{N_{R2}}{N_{S2}} = 2.63, \frac{N_{R3}}{N_{S3}} = 1.88$$

RATIO SPREAD	8.35
RATIO STEPS	
REV2/1	-0.49
1/2	1.82
2/3	1.41
3/4	1.36
4/5	1.37
5/6	1.11
6/7	1.38
7/8	1.14

**FIG. 5b**

	RATIOS	450	452	454	456	457	458	459
REVERSE 2	-2.03		X		X	X		
REVERSE 1	-0.68			X	X	X		
NEUTRAL	0.00					X	X	
1	4.18	X				X	X	
2	2.89	X		X			X	
3	2.05	X	X				X	
4	1.45	X	X					X
5	1.00	X	X		X			
6	0.72	X			X			X
7	0.57		X		X			X
8	0.45			X	X			X

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 1.68$, $\frac{N_{R2}}{N_{S2}} = 2.05$, $\frac{N_{R3}}{N_{S3}} = 2.00$

RATIO SPREAD	9.34
RATIO STEPS	
REV2/1	-0.49
1/2	1.44
2/3	1.41
3/4	1.41
4/5	1.45
5/6	1.38
6/7	1.26
7/8	1.28

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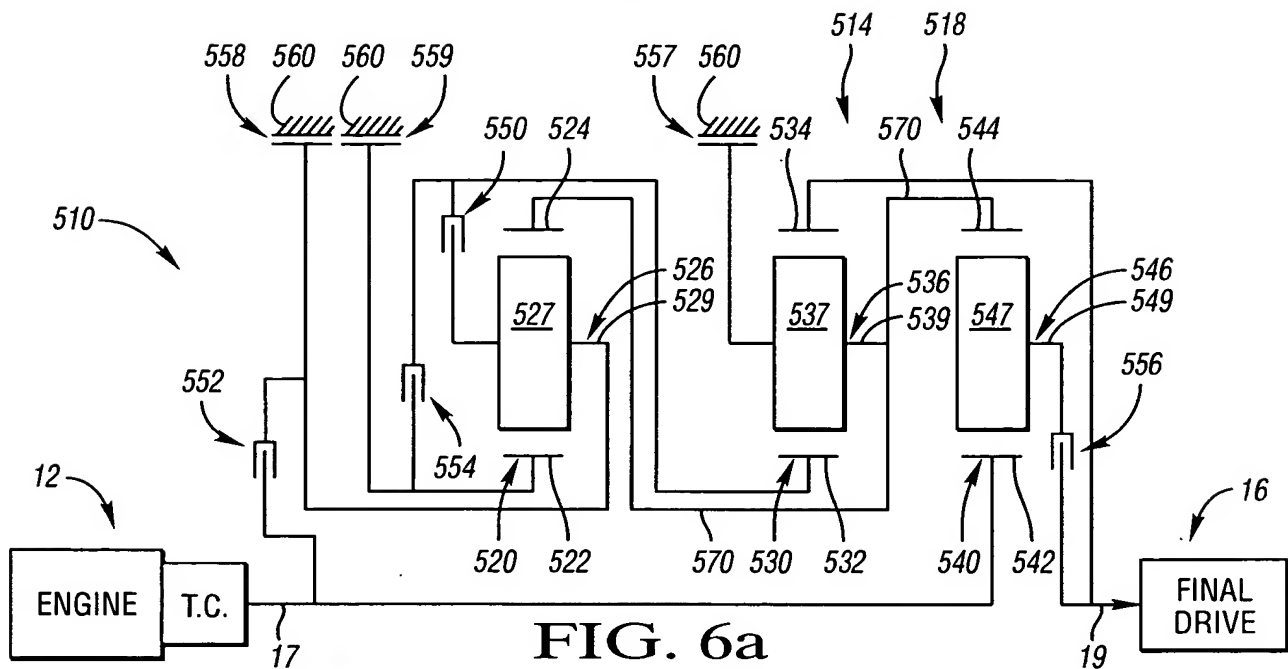


FIG. 6a

FIG. 6b

	RATIOS	550	552	554	556	557	558	559
REVERSE 2	-2.96	X	X			X		
REVERSE 1	-0.74		X	X		X		
NEUTRAL	0.00				X	X		
1	4.00				X	X	X	
2	2.73			X	X		X	
3	1.76	X			X		X	
4	1.23	X			X			X
5	1.00	X	X		X			
6	0.80		X		X			X
7	0.69	X	X					X
8	0.56		X	X				X

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{NR_1}{NS_1} = 3.01$, $\frac{NR_2}{NS_2} = 2.97$, $\frac{NR_3}{NS_3} = 3.00$

RATIO SPREAD	7.14
RATIO STEPS	
REV2/1	-0.74
1/2	1.47
2/3	1.55
3/4	1.42
4/5	1.23
5/6	1.25
6/7	1.16
7/8	1.23

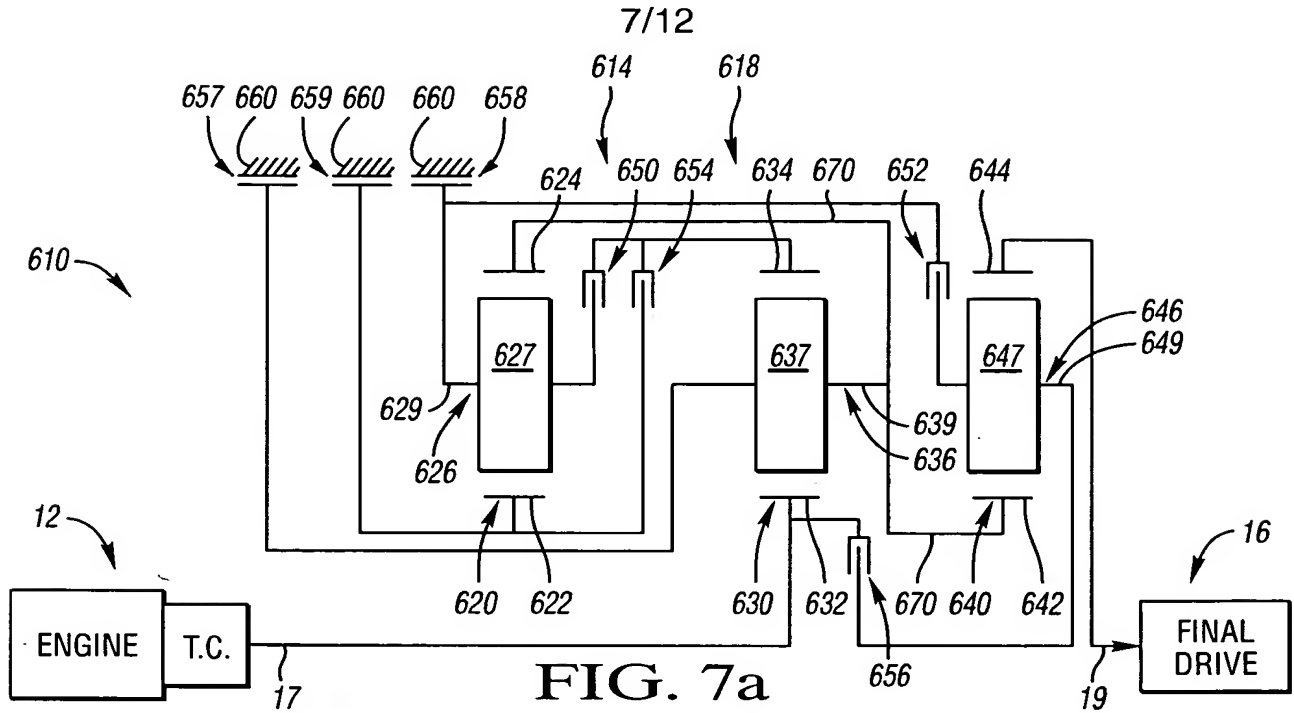


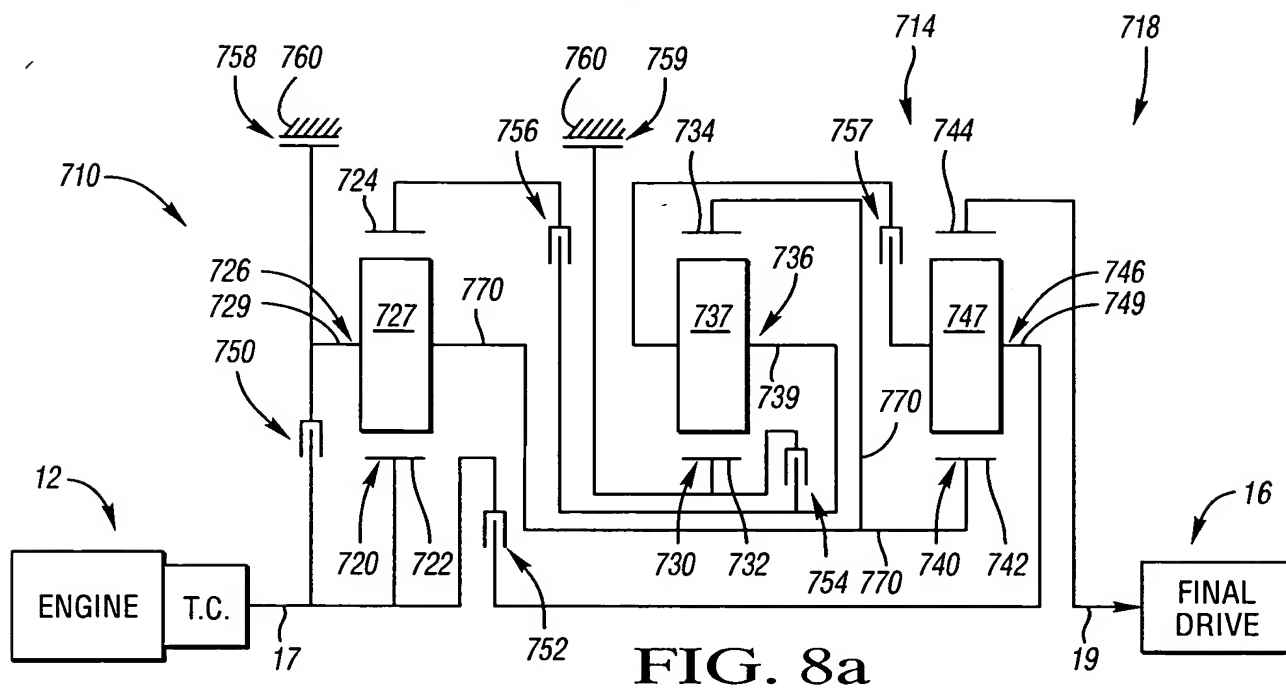
FIG. 7b

	RATIOS	650	652	654	656	657	658	659
REVERSE 3	-4.26	X	X				X	
REVERSE 2	-3.58		X	X		X		
REVERSE 1	-1.10	X	X			X		
NEUTRAL	0.00		X	X				
1	5.82		X	X				X
2	3.21	X	X					X
3	1.42		X		X			X
4	1.00	X	X		X			
5	0.81	X			X			X
6	0.70			X	X			X
7	0.64			X	X		X	
8	0.60			X	X	X		

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.25$, $\frac{N_{R2}}{N_{S2}} = 1.84$, $\frac{N_{R3}}{N_{S3}} = 1.50$

RATIO SPREAD	9.69
RATIO STEPS	
REV3/1	-0.62
1/2	1.81
2/3	2.26
3/4	1.42
4/5	1.24
5/6	1.15
6/7	1.10
7/8	1.06



	RATIOS	750	752	754	756	757	758	759
REVERSE 2	-4.22			X		X	X	
REVERSE 1	-1.41				X	X	X	
NEUTRAL	0.00			X		X		
1	5.85			X		X		X
2	3.24				X	X		X
3	1.93	X				X		X
4	1.29		X			X		X
5	1.00	X	X					X
6	0.85		X		X			X
7	0.77		X	X				X
8	0.69		X	X'			X	X'

(X = ENGAGED CLUTCH

X' = CHOOSE ONLY ONE AS AN ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 2.03, \frac{N_{R2}}{N_{S2}} = 2.00, \frac{N_{R3}}{N_{S3}} = 2.25$$

RATIO SPREAD	8.45
RATIO STEPS	
REV/1	-0.72
1/2	1.81
2/3	1.68
3/4	1.50
4/5	1.29
5/6	1.18
6/7	1.10
7/8	1.11

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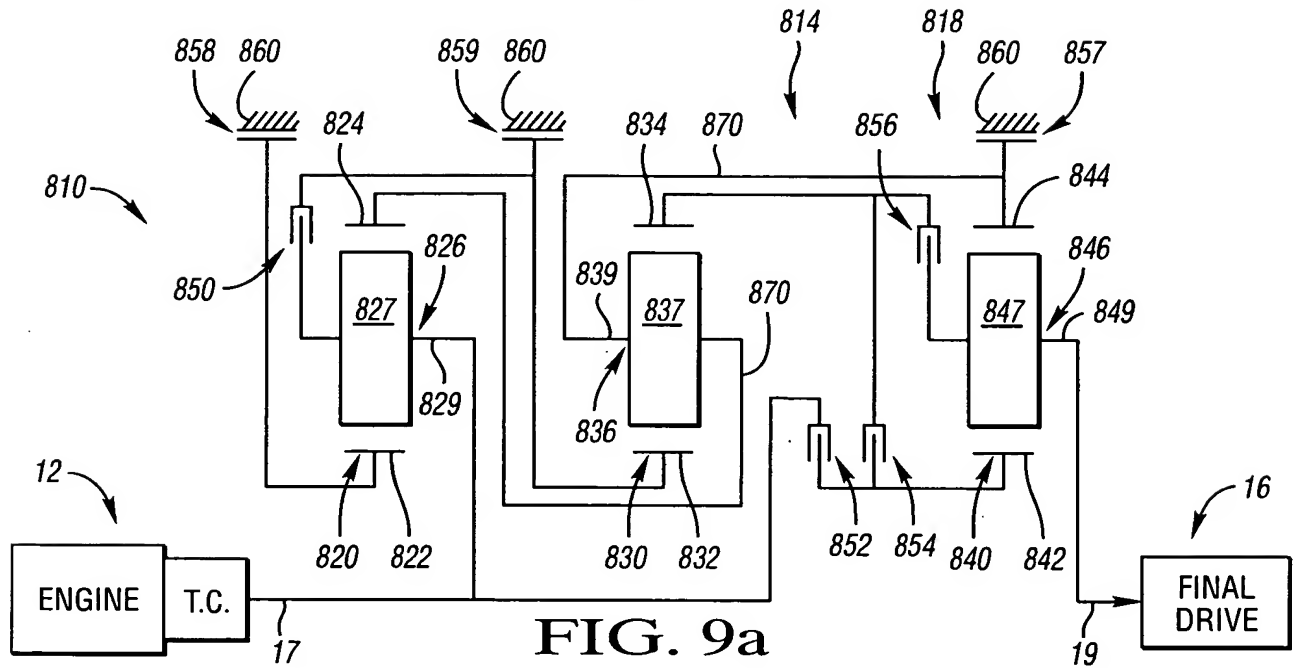


FIG. 9a

FIG. 9b

	RATIOS	850	852	854	856	857	858	859
REVERSE 2	-6.97	X		X		X		
REVERSE 1	-1.74	X			X	X		
NEUTRAL	0.00		X			X		
1	4.00		X			X		X
2	2.10		X		X			X
3	1.38		X	X				X
4	1.00	X	X	X				
5	0.80		X	X			X	
6	0.75			X	X		X	
7	0.66	X			X		X	
8	0.48				X		X	X

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 3.01$, $\frac{N_{R2}}{N_{S2}} = 1.74$, $\frac{N_{R3}}{N_{S3}} = 3.00$

RATIO SPREAD	8.40
RATIO STEPS	
REV2/1	-1.74
1/2	1.91
2/3	1.52
3/4	1.38
4/5	1.25
5/6	1.10
6/7	1.10
7/8	1.38

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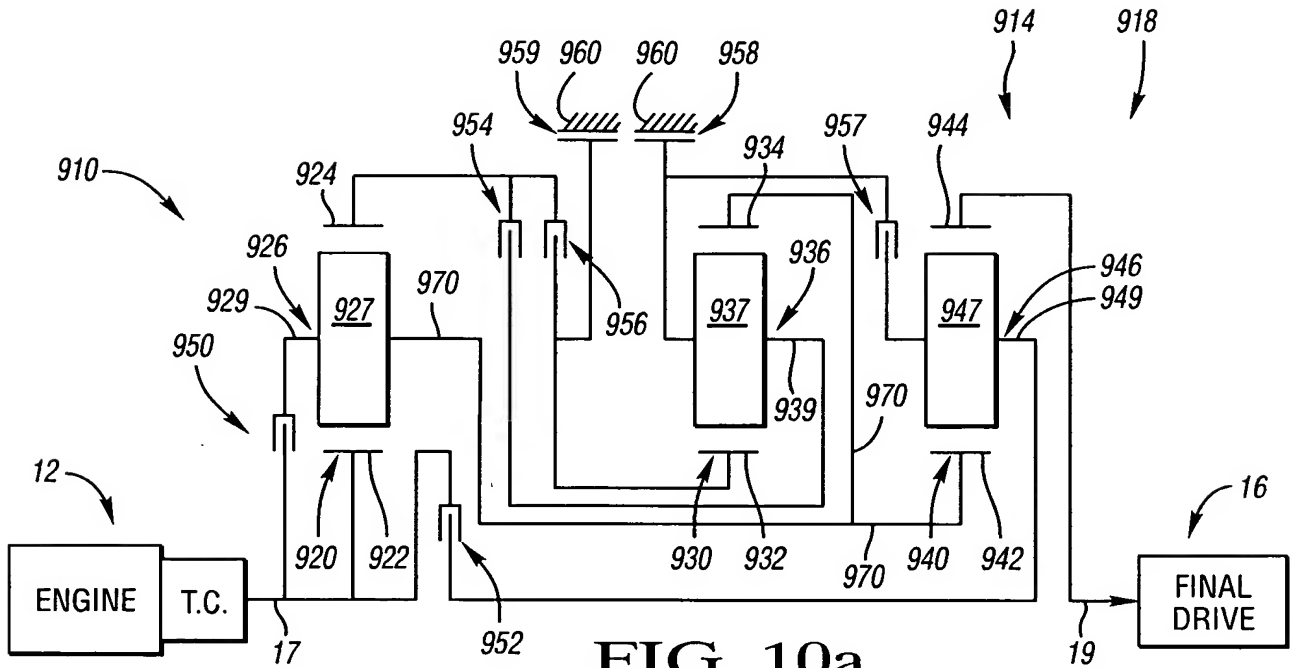


FIG. 10a

FIG. 10b

	RATIOS	950	952	954	956	957	958	959
REVERSE 3	-15.95				X	X	X	
REVERSE 2	-6.83			X		X	X	
REVERSE 1	-2.25	X				X	X	
NEUTRAL	0.00				X	X		
1	5.87				X	X		X
2	3.25			X		X		X
3	1.93	X				X		X
4	1.29		X			X		X
5	1.00		X	X		X		
6	0.85		X	X				X
7	0.77		X	X			X	
8	0.69		X				X	X

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.00$, $\frac{N_{R2}}{N_{S2}} = 1.99$, $\frac{N_{R3}}{N_{S3}} = 2.25$

RATIO SPREAD	8.11
RATIO STEPS	
REV2/1	-1.16
1/2	1.81
2/3	1.68
3/4	1.50
4/5	1.29
5/6	1.18
6/7	1.10
7/8	1.06

FIG. 11a

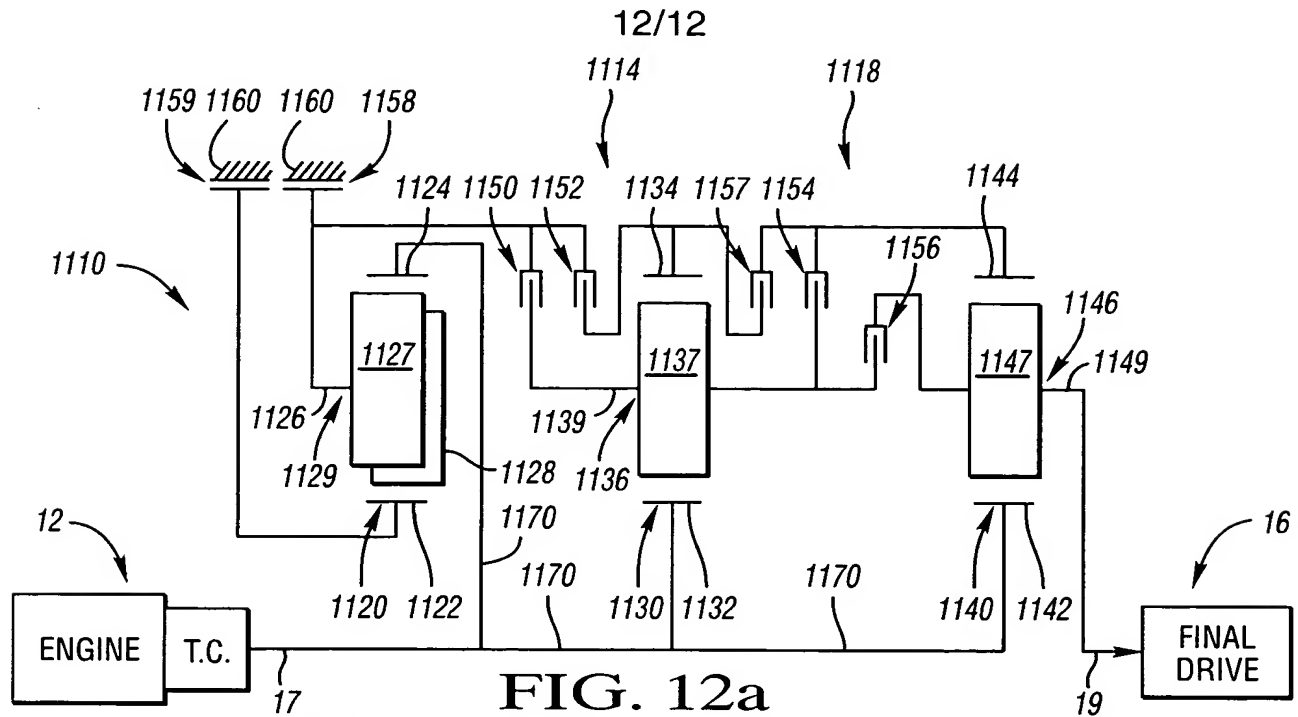
FIG. 11b

	RATIOS	1050	1052	1054	1056	1057	1058	1059
REVERSE 2	-4.11	X					X	X
REVERSE 1	-2.15			X			X	X
NEUTRAL	0.00						X	X
1	4.52		X				X	X
2	2.41		X			X		X
3	1.59	X	X					X
4	1.21		X	X				X
5	1.00		X		X			X
6	0.83			X	X			X
7	0.70	X			X			X
8	0.60				X	X		X

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 3.01, \frac{N_{R2}}{N_{S2}} = 2.31, \frac{N_{R3}}{N_{S3}} = 1.50$$

RATIO SPREAD	7.53
RATIO STEPS	
REV2/1	-0.48
1/2	1.88
2/3	1.51
3/4	1.31
4/5	1.21
5/6	1.20
6/7	1.18
7/8	1.17

**FIG. 12b**

	RATIOS	1150	1152	1154	1156	1157	1158	1159
REVERSE	-4.89	X				X	X	
NEUTRAL	0.00					X	X	
1	3.62		X			X	X	
2	2.51		X		X		X	
3	1.77		X	X			X	
4	1.00		X	X	X			
5	0.78		X	X				X
5'	0.72		X		X			X
6	0.68	X		X				X
7	0.60	X			X			X
8	0.56	X				X		X

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$ TOOTH RATIO: $\frac{N_{R1}}{N_{S1}} = 2.51$, $\frac{N_{R2}}{N_{S2}} = 1.51$, $\frac{N_{R3}}{N_{S3}} = 2.63$

RATIO SPREAD	6.52
RATIO STEPS	
REV2/1	-1.35
1/2	1.44
2/3	1.42
3/4	1.77
4/5	1.29
5/6	1.15
6/7	1.12
7/8	1.08